

## SHUHAN XU

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## EDUCATION

Karolinska Institutet, Stockholm, Sweden

**M.Sc. in Molecular Techniques in Life Science**

**2017 – Present**

*A programme combining bioinformatics analysis of big data with high throughput molecular biology*

Nanyang Technological University, Singapore

**B.Sc. (Hons) in Biological Sciences, Graduated with Honours (Highest Distinction)**

**2014 - 2017**

*A programme offering broadened training in biological sciences*

University's Scholars Programme (USP) - Liberal Arts Programme

Thesis: "Investigating Hypoxia-mediated Inhibition of N6-Methyladenosine RNA Demethylation"

## HONOURS/AWARDS

**Karolinska Institutets Global Masters Scholar**

**2017**

*Scholarship awarded to excellent students admitted to Karolinska Institutet's Global Master's Programmes*

**Dean's List AY 16/17**

**2017**

*Top 5% of the cohort*

**Nanyang Scholar**

**2013**

*Highest level of Scholarship for outstanding students pursuing bachelor's degree in Nanyang Technological University*

## RESEARCH EXPERIENCE

Science for Life Laboratory, Stockholm, Sweden

**SciLifeLab Stockholm Summer Fellow in Erik Sonnhammer's Lab**

**May 2018 – Present**

- Developed a pipeline for differential network analysis of spatial transcriptomics data
- Devised methods to preprocess spatial transcriptomics data and reduce bias in network inference
- Performed statistical analysis on gene clusters of prostate cancer detected using various algorithms

Nanyang Technological University, School of Biological Sciences, Singapore

**Final Year Project student in Newman Sze's Lab**

**May 2017 – Aug 2017**

- Investigated whether oncometabolites produced during hypoxia influence m<sup>6</sup>A RNA modification
- Generated overexpression cell lines to modulate the level of oncometabolite in hypoxic conditions
- Performed ELISA to quantify the level of m<sup>6</sup>A after hypoxic treatment

Karolinska Institutet, Department of Microbiology, Tumor and Cell Biology, Stockholm, Sweden

**Research Assistant in Ulf Ribacke Lab**

**Aug 2016 – Jan 2017**

- Explored circRNA biogenesis in *Plasmodium falciparum*
- Performed and optimized RLM RACE-PCR and northern blot to investigate the 5' and 3' UTR sequence of the mRNA of the corresponding circRNA
- Learnt motif searching tools to look for potential motifs for the backsplicing of circRNA
- Conducted time course experiment and qPCR to investigate changes in level of circRNA and alternative splicing in *P. falciparum* in response to drug

## LEADERSHIP

Crescent Hall Production, Singapore

*Theatre production*

**Stage Manager**

**Dec 2015 – May 2016**

- Organised the first theatre production for Crescent Hall
- Discussed and edited script with directors
- Schedule rehearsal for cast and director

Dunman High School Robotics Club, Singapore

*Robotics enthusiasts*

**Team Leader**

**Jan 2010 – May 2011**

- Guided junior members in programming robots
- Awarded 1<sup>st</sup> position in Singapore Robo Grand Prix Competition

## VOLUNTEERING

Youth Expedition Program to Cambodia

**Member**

**Jun 2012 – Dec 2012**

- Raised 2000 SGD to build a bridge for Cambodia villagers
- Taught local children basic life skills such as English and numeracy

Town Council Meet-the-People Session

**Petition Writer**

**Jan 2012 – May 2012**

- Record the concerns of the residents in Chua Chu Kang Town council
- Drafted letters on behalf of Member-of-Parliament to relevant ministries

## SKILLS

Python3

R

Octave

Machine Learning

## LANGUAGES

Chinese – native language

English – speak fluently and read/write with high proficiency